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Screening provides an opportunity to start building patients' trust in the eye care service.
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# Putting patients at the heart of cataract care

Respectful care at every step, from referral to follow-up and refraction, keeps patients coming back.

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The World Health Organization (WHO) has urged countries to improve access to high-quality cataract surgery.[1] One in every two people facing cataract-related blindness worldwide still needs access to surgery;[2] this equates to around 17 million people who are blind and 83 million who have moderate or severe vision impairment due to cataract.[3] The African region faces the greatest gap, with three in four people remaining untreated. Women are disproportionately affected across all regions, consistently experiencing lower access to care than men.[2]

Improving the quantity and quality of cataract services requires careful planning and joined-up thinking, as described in our 2022 issue, 'Improving cataract services' (**bit.ly/CEHJ166**). However, even the best cataract service cannot improve access if patients are not willing to come forward. Compassionate patient care and respectful communication must therefore be prioritised at every step of the patient's journey.

For most people, this starts at **community** or **primary eye care level**, through screening. These early encounters are critical for building trust with patients and their family members or carers. Screening teams must identify cataract accurately, rule out other causes of vision loss, and explain what they found and what to do next – all of which helps to ensure appropriate and timely referral.

# About this issue

Even the best cataract service cannot improve access to cataract care if patients are not willing to come forward. This means that compassionate patient care and respectful communication with patients and their family members must be prioritised. These are vital at every step in the cataract journey: from detection to follow-up and postoperative refraction.

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At the **referral centre**, respectful and compassionate communication with patients and family members is vital. Take time to listen to their fears and concerns, and be alert to any situation in which relatives are actively discouraging or preventing an older family member from having cataract surgery – this should prompt further discussion or investigation. Before surgery, speaking to patients about their visual needs and IOL options contributes to better patient satisfaction.

**During surgery**, calm reassurance and clear, simple instructions can help patients remain still and relaxed in the operating theatre, which is essential for surgical precision and the prevention of avoidable complications. Some surgeons agree on a signal the patient can use to communicate distress or pain (e.g., raising a hand), while others play gentle music or arrange for a trained volunteer or staff member to hold the patient's hand, thereby reducing anxiety and even pain.[4,5]

**After surgery**, show patients and family members how to instil eye drops correctly, as many patients struggle to do so on their own. Provide clear written and verbal instructions on hygiene, warning signs of complications, and follow-up schedules and explain how to seek urgent care if problems arise. Encouraging everyone to ask questions, and confirming understanding before discharge, reduces the risk of non-adherence and delayed detection of complications. Counselling patients and family members can help ensure that regular **follow-up** takes place and that patients get the **refractive care** they need, including near-vision spectacles. This allows them to achieve the best postoperative visual outcomes possible.

Above all, if we want to offer the kind of cataract services that people are willing to recommend to others, we must remember that our patients are human beings. Respectful, compassionate communication, from detection through to follow-up and postoperative refraction, is what earns trust and keeps people coming back.

**References**


1 World Health Organization. One in two people facing cataract blindness need access to life-changing surgery. Geneva: WHO; 2026. **bit.ly/who-news-cataract**

2 McCormick I, Ouchtar Y, Macleod D, et al. Effective cataract surgical coverage in adults aged 50 years and older: empirical estimates from population-based surveys in 68 countries and modelled estimates for 2000–30. Lancet Glob Health. 2026;14(3):e367-e377. doi:10.1016/S2214-109X(25)00435-8

3 Burton MJ, Ramke J, Marques AP, et al. The Lancet Global Health Commission on Global Eye Health: vision beyond 2020. Lancet Glob Health. 2021;9(4):e489-e551. doi:10.1016/S2214-109X(20)30488-5

4 Piccus R. Communication in ophthalmological surgery: perspectives from an observer. Eye News. 2026;32(4). **bit.ly/4gSBej5**

5 Astbury N. A hand to hold: communication during cataract surgery. Eye (Lond). 2004;18(2):115-116. doi:10.1038/sj.eye.6700569



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# Screening for cataract in the community

Age-related cataract is the most common cause of treatable blindness globally, so it is vital that patients with visually significant cataract are identified and referred promptly.

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Screening for cataract in the community is vital in order to ensure that under-served and high-risk populations are able to undergo safe, high-quality surgery. Community screening should prioritise:

- Adults aged 50 years and older
- Those reporting difficulty in carrying out daily activities
- Women, people on low incomes, people living with disabilities, and people living in remote areas.

Due to the costs, time, and often long distances involved in having cataract surgery, it is important to avoid referring patients who do not have treatable cataract.

In this article, we suggest how, even with minimal equipment and instruments, eye health workers at community level can refer those patients most likely to benefit from surgery, while also keeping a careful eye out for ocular emergencies or other eye conditions that require referral and treatment.

Briefly, this can be done by:

1. Confirming there is significant sight loss, i.e., visual acuity (VA) < 6/12 or 6/18, depending on local guidelines.
2. Checking that the patient's history and the results of other examinations are consistent with cataract.
3. Ruling out other causes of sight loss, and referring these patients to specialist services where needed.

### What you will need

- A near and distance visual acuity chart
- Measuring tape or string of known length to position the chart and patient at the correct distance apart
- An occluder with a pinhole
- A pen torch or Arclight device
- Referral slips, data sheets, and a pen.

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**Screening patients for cataract in the community.** CAMBODIA

To effectively screen for cataract, you will ideally need access to a room where you can **make the room as dark as possible**, e.g., by covering the windows. This is so you can check pupil response and test the fundal reflex (glow) effectively.

However, there is still a lot you can do and find out, even if you cannot make the room very dark.


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## Initial examination

### 1. Take a history

Ask about the patient's age, lifestyle, and their medical history:

- How old are you?
- Do you smoke, or spend a lot of time outdoors?
- Do you have any past history of eye problems or treatment (e.g., eye injury, use of spectacles, medication/surgery or eye problems as a child)?

Sight loss due to age-related cataract usually affects people aged 50 years or older; however, lifestyle factors such as smoking and high levels of UV exposure can lead to earlier onset.[1] It is also possible to develop cataract due to an eye injury; this is usually in one eye only and the onset can be quicker, and there can be additional signs on examination, such as a corneal scar or a misshapen pupil.

Ask about the sight loss:

- Has it been gradual or sudden? Sight loss due to age-related cataract is painless and gradual. Urgently refer patients with sudden sight loss or pain to an eye specialist.
- Are one or both eyes affected? Age-related cataract usually affects both eyes, but it is often worse in one eye.
- Has there been any pain and/or redness? Patients with vision loss accompanied by pain and redness need to be seen by an eye specialist promptly, as they may have a more urgent sight-threatening condition. They may still have cataract, but this would be detected by the eye specialist.
- Is sight loss interfering with your daily activities? People who have difficulty with their daily living activities because of cataract are most likely to benefit from surgery.

Ask about other symptoms:

- Do you experience discomfort when looking at bright lights, particularly at night? Glare can be one of the early signs of cataract.

### 2. Assess visual acuity

- Test and record distance visual acuity in each eye separately; first unaided, then with the pinhole occluder.
- Test and record near visual acuity. If near vision is reduced, tell the person they would benefit from near-vision spectacles, and explain where to get them.

**What this means.** People who are likely to benefit from cataract surgery will have reduced vision. The World Health Organization now measures the effectiveness of a country's cataract surgery by the number of people able to see better than 6/12 after their operation. By implication, people with visual acuity of less than 6/12 should be offered surgery. However, in many countries, surgery is only offered to people with visual acuity of less than 6/18; this may also depend on the hospital or context where surgery is done.

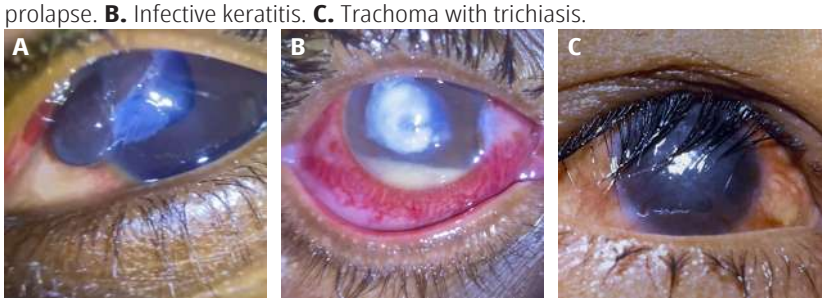
If vision improves with pinhole, or if they have reduced near vision, they may need distance vision and/or near-vision spectacles and should be referred for refraction. If they also have cataract, their refractive error will change after surgery, depending on the intraocular lens used. These patients should be referred for refraction following surgery; this is usually done at or after the last follow-up visit.

### 3. Examine the front of the eye

Examine the front of the eye using a torch (ideally with some form of magnification) or an Arclight. The following patients should be referred urgently to an eye specialist:

- Patients with any sudden vision loss or history of eye trauma (e.g., Figure 1A)
- Patients with a painful red eye, with discharge (e.g., Figure 1B) or without discharge (e.g., Figure 1C)
- A young patient with a white pupil

**Figure 1** Examples of patients who need urgent referral: **A.** Trauma with iris prolapse. **B.** Infective keratitis. **C.** Trachoma with trichiasis.

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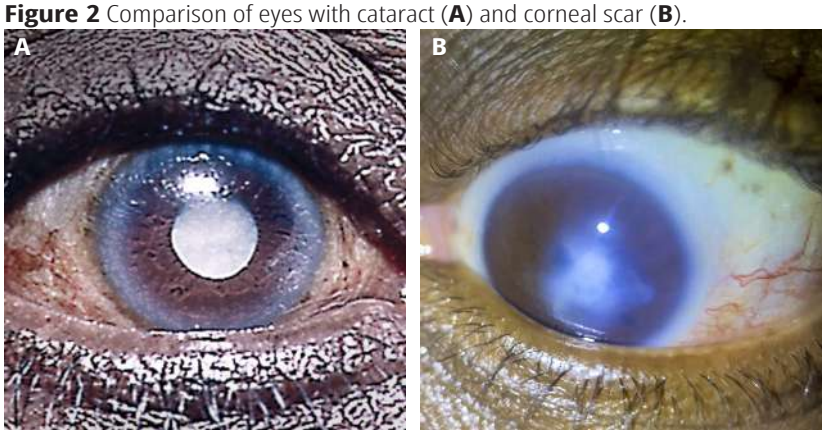
A corneal scar can be confused with a cataract.

- **Cataract** can appear as a central, round, grey/white area filling the whole of the pupil space (Figure 2A).
- **Corneal scars** are on the surface of the eye (the cornea) and are often more irregular in shape; they are not always central (Figure 2B).

**Figure 2** Comparison of eyes with cataract (**A**) and corneal scar (**B**).

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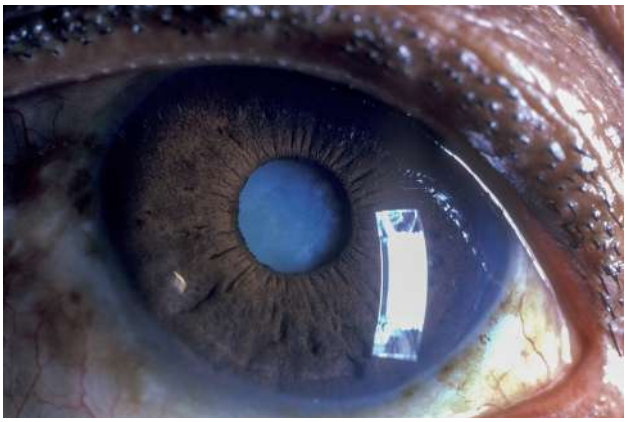
If the corneal scar is central, and/or significantly obscures vision, the patient would benefit from being referred to an eye specialist.

### 4. Look at the pupil

- Are the pupils round and equal? Are both pupils the same size? If not, refer the person to a medical doctor or eye care professional to rule out a more urgent condition.
- Are the pupils black? In some patients with mature cataract, the pupil can look grey or white (Figure 3). However, operable cataract is not always visible as a grey or white pupil. Posterior subcapsular cataract is a good example: the anterior examination may look fairly normal, but the patient can have poor vision and experience significant glare when looking at bright light or driving at night.

**Figure 3** In patients with cataract, the pupil can look grey or white.



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## If you can make the room dark

**1. Check the pupil response to bright light**

Do the following:

- Ensure the room is as dim as possible (e.g., turn off the light and cover any windows).
- Position the patient so that any remaining source of light is behind them, and they are looking into the darkest part of the room.
- Turn on your torch or Arclight. Shine it at one eye at a time. Each pupil should constrict briskly, even if cataract is present.

**What this means.** In patients with cataract, even significant cataract, the pupil should constrict normally. If it does not respond or constrict, this suggests an optic nerve problem such as advanced glaucoma, optic atrophy, or retinal disease (such as retinal detachment). Refer these patients to an eye specialist. They may still benefit from cataract surgery, but the problem at the back of the eye needs to be assessed first.

**2. Check the fundal reflex**

If a torch or Arclight is available, the fundal reflex test can add useful information and improve the quality of the referral.

What to do:

- Keep the lights off and windows covered so the room continues to be dark
- Stand an arm's length away from the patient and hold the torch or Arclight at their eye level, pointing at the midpoint between the eyes.
- Ask the patient to look at the light or just above it, so the light is shining into both pupils at the same time. The fundal reflex is the light that reflects from the back of the eye, visible through the pupil (Figure 4).
- Observe and compare the reflex in each eye, with reference to the VA recorder earlier. Note whether the reflex is the same in both eyes, or whether it is dull or completely absent in one or both eyes. If there is a difference between the eyes, write down which eye has the brighter reflex.

**What this means.** In patients with cataract, the fundal reflex should be abnormal or absent, and the brightness of the reflex should correspond inversely to the degree of opacity of the cataract.

- In the absence of cataract, the brightness and colour will be the same in both eyes (Figure 4A).
- If the patient has unilateral cataract (often due to an eye injury), the reflex may be dull or even completely absent in the affected eye (Figure 4B).
- The reflex can be abnormal in other conditions too, such as a retinal detachment or a bleed from diabetic retinopathy; consider the patient's history.
- In patients with age-related cataract, the fundal reflex should appear brighter in the eye with better VA; this is because the cataract in that eye is less dense, allowing more light to pass through. Therefore, if the visual acuity and fundal reflex results are consistent with each other (i.e., the eye with the brighter reflex also has higher visual acuity), this means cataract is the most likely cause.

## Should I refer a patient for cataract surgery?

In general, it is advisable to refer patients for cataract surgery if:

- They have reduced vision (<6/18 or <6/12), consistent with age-related cataract, that causes difficulties with daily functioning.
- There is a visible lens opacity or an abnormal fundal reflex.
- There is no obvious alternative explanation (i.e., nothing is visible on torch light examination, and the pupil response is normal).

However, **if you cannot make the room dark**, refer patients whose history is consistent with cataract, who have no other apparent causes of sight impairment, and who have visual acuity with pinhole worse than 6/12 to 6/18 (depending on the referral criteria for your area).

**If you can check the pupil response to bright light**, refer patients who meet the above criteria *and* have a normal pupil response; those with an abnormal response should be referred to an eye specialist before cataract surgery is considered.

**If you can also check the fundal reflex**, refer patients who also have an abnormal fundal reflex that is consistent with the visual acuity results.

All referred patients still need a more detailed examination before surgery – see the article in issue 128: 'Assessing patients at the cataract treatment centre and allocating the right surgeon' (**bit.ly/cehj885**).

### Counselling and referral

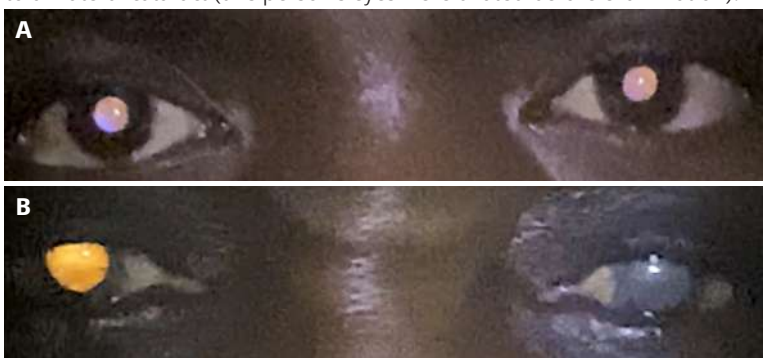
Explain the benefits and risks of cataract surgery, where to go, and what is involved, including the cost. This will include travel, fee for surgery, food and water, and the indirect costs of time away from work or home. The person is likely to need someone to accompany them and help with postoperative care too.

Complete any clinical documentation and give the patient a referral slip with the address of the clinic and the date and time they must attend. Record the patient's phone number and other relevant details so you can follow up and track those who do not attend.

**Reference**

1 Hashemi H, Pakzad R, Yekta A, et al. Global and regional prevalence of age-related cataract: a comprehensive systematic review and meta-analysis. Eye (Lond). 2020;34(8): 1357-1370. doi:**10.1038/s41433-020-0806-3**.

**Figure 4** Normal and abnormal fundal reflex. **A.** Normal fundal reflex in both eyes. **B.** Normal reflex in the right eye, with absent reflex in the left eye due to unilateral cataract (this person's eyes were dilated before examination).

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# Strengthening postoperative refraction and follow-up to improve effective cataract surgical coverage

It is essential to strengthen follow-up care and postoperative refraction services to ensure patients receive the full benefits of cataract surgery.

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**Postoperative refraction during a follow-up outreach visit.** INDIA

Uncorrected refractive error after cataract surgery is a major cause of avoidable visual impairment worldwide. Even when the operation is technically successful, patients may not achieve targeted visual outcomes without appropriate follow-up and refraction. Strengthening follow-up care and refraction is therefore essential to ensure patients receive the full benefits of cataract surgery, as uncorrected refractive error after the operation has a significant negative impact on visual outcomes. For example, a hospital-based study of 84,000 cataract patients found that postoperative refraction would improve visual acuity by two lines or more in 54.4% of all operated eyes: in 71.2% of eyes operated on using the manual small-incision cataract surgery (MSICS) technique and in 21.0% of eyes undergoing phacoemulsification.[1]

Postoperative refractive management also contributes to achieving the global target of improved effective cataract surgical coverage (eCSC) and improved vision-related quality of life.[2]

## Current challenges in postoperative follow-up

Postoperative follow-up rates vary significantly across low- and middle-income countries. In a study involving 40 centres across ten countries in Asia, Africa, and Latin America – where patients were instructed to return for follow-up 40 days after the operation – the unprompted follow-up rates ranged from 27% to 93%, with an average rate of 51%.[3] Another recent study investigating reasons for missed follow-up visits revealed multiple patient-reported barriers: 'forgot' (20%), 'busy with my usual work' (11%), 'poor health' (10%), 'did not have information on follow-up' (9%), 'personal commitments' (9%), 'can see better with operated eye' (8%), 'no one to accompany me' (8%), other (25%).[4]

In general, several key factors influence follow-up rates:

- **Provider mindset.** A common belief among eye care providers is that patients satisfied with their postoperative vision do not return for follow-up, so their vision must be good. As a result, the importance of follow-up is undervalued and not emphasised.
- **Lack of structured communication.** Often, it is not part of the protocol to counsel patients about the importance of coming back for follow-up visits; this can lead to poor compliance.
- **Access challenges.** Patients transported from outreach areas to a base hospital for cataract surgery are often expected to return on their own to the base hospital for follow-up, which they may find logistically or financially challenging.
- **Multiple follow-up appointments.** Patients are scheduled for several follow-up visits (day 1, week 1, week 2, month 1, month 2, and month 3), with refraction typically done only during the final visit. Most patients don't show up after the first visit or two, and thus don't get refraction done at the one-month follow-up visit.

## Recommendations for postoperative follow-up and refraction

Refraction should be carried out once refractive stability is achieved. Ensuring that patients return for follow-up at this stage is essential, not only to prescribe appropriate spectacles but also to detect and manage complications early.

For patients undergoing MSICS, postoperative refraction, as a routine, should be advised around 4–6 weeks after the operation, by which time the surgical wound would have healed and refractive stability is usually achieved. Exceptions to this could be those who had serious intraoperative complications or poor pinhole vision at discharge; a clinical decision can be made for these patients to come in earlier.

Due to a smaller incision and thus quicker healing, patients who undergo phacoemulsification may be assessed for refraction and prescribed spectacles as early as two weeks after surgery, provided no complications are detected during the postoperative visit.

During follow-up visits for postoperative refraction, we recommend the following:

- Assess near vision (to check for presbyopia) and carry out refraction if needed. Prescribe spectacles for near vision or direct patients to where they can purchase over-the-counter readers.
- Assess distance vision in all patients and check pinhole in all who cannot read 6/6 (20/20) in the operated eye.
- If vision improves with pinhole, carry out refraction and prescribe spectacles to correct distance refractive errors.
- If vision does not improve with pinhole or refraction for distance or near vision, patients should undergo a dilated examination to rule out other potential causes for reduced best-corrected visual acuity, such as cystoid macular oedema or other posterior segment pathologies, so they can be managed appropriately.
- For patients who are advised to return for follow-up to manage complications identified during the current visit, refraction should be performed at the subsequent visit to ensure that corrective spectacles are provided when appropriate.

## Strategies to improve postoperative follow-up and refraction

1. **Changing the mindset of eye care providers.** Eye care teams must recognise that postoperative follow-up is an integral part of the cataract surgery protocol. In addition to the opportunity to correct residual refractive error, it also offers clinical insights for continuous improvement.
2. **Counselling.** Counsel patients and their family members – both when they report for surgery and at discharge – about the importance of coming back for final follow-up visits so they can enjoy the full benefits of cataract surgery.
3. **On-site follow-up for outreach patients.** For patients identified and treated through outreach screening camps, the follow-up date and location (ideally the same site as the screening) should be pre-decided and clearly communicated both before the operation and at discharge. Community partners can help with the mobilisation of patients for follow-up on the scheduled date. Delivering spectacles on site can improve the effectiveness of refraction services.
4. **Using primary eye care centres for follow-up.** In recent years, many eye hospitals have established primary eye care or vision centres. For patients living near a vision centre, the follow-up visit could be scheduled in such a centre, thereby reducing travel barriers.
5. **Integrating follow-up into cataract surgery services.** Follow-up visits should be packaged as an integral part of cataract care and offered without additional cost. Similarly, the price of the operation could cover the cost of spectacles, or they could be given at a subsidised cost.
6. **ICT-enabled follow-up tracking.** Using information and communication technologies (ICT) for prompts such as phone calls, SMS reminders, or WhatsApp messages is an effective way to remind patients about their scheduled follow-up visits. These tools help improve follow-up adherence by alerting patients in a timely and personalised manner.
7. **Data and monitoring.** Hospitals should regularly monitor the follow-up rate to gain insights into how to improve it.

In certain contexts, where returning for follow-up is logistically difficult or very expensive, the status of the eye could be checked via a telephone call, and the patient's distance visual acuity could be assessed and reported by a family member by using mobile apps like WHOeyes, the visual acuity assessment tool released by WHO (see **bit.ly/3ZWYC6g**). Patients should also be encouraged to visit a local eye care provider for near vision correction, if needed.

## Team coordination and outcome monitoring to identify gaps

The outcome of a patient's postoperative refraction visit reflects the collective efforts of everyone involved in that patient's care journey, including the ophthalmologist, counsellor, biometry technician, supply-chain person, operating room team, and refractionist/optometrist. Outcomes can be continually improved through coordinated teamwork, regular review meetings, and completion of action items.

Reviews provide valuable feedback to optometrists and allied ophthalmic personnel about the accuracy and quality of biometry performed for intraocular lens (IOL) power calculation, while ophthalmologists gain insights into surgically induced astigmatism and overall postoperative outcomes. Additionally, follow-up visits may reveal intraoperative or postoperative complications that were initially missed. This feedback enables both optometrists and ophthalmologists to refine their skills and clinical decisions, ultimately leading to better patient outcomes.

Outcome monitoring should be treated as a multidisciplinary responsibility. Regular team reviews, shared learning, and a culture of continuous improvement can help identify and address gaps across the surgical care pathway. Examples include the following:

### High spherical error

When patients present with significant residual spherical error, it should be recognised as a potential biometry or implant error. A root cause analysis should be jointly conducted by the optometrist and ophthalmologist to identify possible reasons, such as incorrect machine calibration, poor measurement technique, transcription errors, or incorrect IOL power calculation or implantation.

### High astigmatism

Patients with unexpected high postoperative astigmatism should be reviewed by both the optometrist and ophthalmologist. The team should analyse the source of the error and explore preventive strategies, such as counselling patients on the option of toric IOLs, planning limbal relaxing incisions, or choosing the incision site for MSICS based on preoperative astigmatism.

### Refractive surprises

Spherical equivalent (SE) is calculated using the following formula:

$$\text{SE} = \text{spherical power} + \frac{\text{cylindrical power}}{2}$$

As a guide, if the postoperative spherical equivalent at 30 days is greater than ± 1.0 D from the target refractive outcome in phacoemulsification, or greater than ± 2.0 D from target refractive outcome in MSICS, an examination should be performed to investigate the cause of the refractive surprise.

## Rwanda

*Theophile Thuyisabe, Kabgayi Eye Unit, Rwanda*

At Kabgayi Eye Unit in Rwanda, we identified a troubling pattern: numerous patients, particularly after cataract surgery, failed to return for follow-up appointments. Conversations with them revealed a significant concern. Although the initial operation was financed through insurance or other programmes, they were told that the community insurance did not cover the cost of the spectacles. Therefore, they were genuinely anxious about potential hidden costs related to follow-up care, such as acquiring new spectacles or scheduling extra check-ups. It was heartbreaking to discover that some patients opted not to come back, enduring blurry vision because they felt they had exhausted their financial resources.

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**Patients waiting for surgery.** RWANDA

We knew we had to do something to ease their minds, so we introduced a support system specifically for follow-up care. This meant assisting vulnerable patients with their transportation costs and providing spectacles free or at an affordable price to those in need. We ensured that every patient was informed about these changes before they left, both through direct conversation and clear written communication. Our message was straightforward: your return visit is crucial for your vision, and it won't come with any surprise bills. Our clinical team even followed up with phone calls and texts to remind them and provide reassurance.

The impact was immediate and heartwarming: we saw a significant increase in follow-up visits, and more patients were getting the refractions and spectacles they needed. Their smiles told us they were happier, and they started telling their friends and neighbours about our commitment to their well-being. Crucially, this allowed us to fine-tune their vision even further, leading to much better surgical outcomes and, ultimately, to more people coming for cataract surgery, thereby improving our surgical outcome indicators, including eCSC.

## India

*Pankaj Vishwakarma, Mission for Vision, India*

Tulsi Eye Hospital, founded in 2002 in Nashik in the state of Maharashtra, is a charitable organisation focused on providing eye care to underserved communities. Through its extensive rural outreach programme, the hospital carries out approximately 16,600 cataract surgeries each year, of which 57% are provided at no cost to patients from socioeconomically weaker communities. A committed outreach team ensures that patient care continues well beyond the operation. Each cataract patient is scheduled for two post-surgery follow-up visits. During the final follow-up, refraction is conducted and bi-focal spectacles are distributed at no cost.

At the time of discharge, patients are educated on the need for follow-up visits, which are conducted at the same locations where the initial camps were held. Follow-up compliance is further encouraged through reminder phone calls. Even so, attendance rates remain between 70% and 75%, with patients often citing reasons such as lack of an accompanying companion, financial constraints, limited transportation options, or satisfaction with their vision for not returning.

To complete the follow-up process, patients typically need to attend camp again to collect their spectacles. The hospital has also developed a network of village volunteers who support the outreach team. These volunteers play a key role in connecting with patients, ensuring that eye care continues beyond surgery through consistent follow-up and strong community involvement.

## Conclusion

Follow-up care and postoperative refraction significantly contribute to enhancing patients' visual functioning, as well as eCSC, and thus they must be seen as essential parts of cataract services. Cataract programmes should make follow-up easy, provide clear communication, and use technology and community networks to enable patients to return for follow-up. These simple and practical steps can make a significant difference to patient outcomes and help to further reduce avoidable vision impairment due to uncorrected refractive error.

### References


1 Gupta S, Ravindran RD, Subburaman GB, S AV, Ravilla T. Predictors of patient compliance with follow-up visits after cataract surgery. J Cataract Refract Surg. 2019;45(8):1105-1112. doi:**10.1016/j.jcrs.2019.02.024**

2 Vishwakarma P, Sundararaj L, Chavan S, et al. Spectacle compliance postcataract surgery significantly improved vision function-related quality of life of adult patients in India: Evidence from a multicenter longitudinal cohort study. Oman J Ophthalmol. 2023;16(3):500-508. doi:**10.4103/ojo.ojo_234_22**

3 Congdon N, Yan X, Lansingh V, et al. Assessment of cataract surgical outcomes in settings where follow-up is poor: PRECOG, a multicentre observational study. Lancet Glob Health. 2013;1(1):e37-45. doi:**10.1016/S2214-109X(13)70003-2**

4 Vishwakarma P, Mondal A, Ranpise D, Sundararaj L, Shaikh S, Chavan S, Kurian E. Barriers to attending one-month review post cataract surgery by patients availing free cataract treatment in India. Int J Community Med Public Health. 2025;12(6):2538-45. doi:**10.18203/2394-6040.ijcmph20251690**

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# Supporting patient choice in IOL selection

Some patients may wish to retain good near vision after cataract surgery. What are their options, and how can we support them?

The standard approach to intraocular lens (IOL) selection is to use monofocal IOLs – the most affordable and widely available type – to correct for distance vision, usually aiming for distance visual acuity (VA) of 6/6. This makes sense, generally speaking, as the quality of cataract surgery is defined in terms of distance visual acuity. In fact, the current WHO standard for cataract surgery is 'effective cataract surgical coverage', defined as the proportion of patients needing cataract surgery who have received surgery and have distance VA of 6/12 or better, which is the cut-off for driving in most countries.

Monofocal IOLs provide clear vision at a specific focal distance. Most patients who receive monofocal IOLs selected to provide good distance vision (emmetropia) will therefore need to purchase near-vision spectacles in order to use a computer or a smartphone, or to undertake detailed near work.

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**Postoperative distance and near visual acuity testing, followed by refraction and spectacle dispensing, if needed, are vital to ensure good visual outcomes for patients after cataract surgery.** NIGERIA

While distance vision remains important for the majority of patients, providing patient-centred care means acknowledging each patient as an individual, with individual needs. Some patients may prioritise good near vision over good distance vision. This is especially true for many patients with myopia, who are used to being able to see well up close without the need for near-vision spectacles. Some patients may also wish to avoid using near-vision ('reading') spectacles for cosmetic or other reasons.

## Discussing options with the patient

**1. Assess the patient: their vision, health, and lifestyle**
Assess the patient's vision with and without correction, their ocular symptoms, and previous eye procedures.

To better understand the patient's lifestyle and vision needs, ask about their work and leisure activities, and how they need and want to use their sight: would this mainly be for long distances, middle distances, or near distances? Are there things they would like to do, or things they can no longer do which they would like to resume?

Remember to allow time for the patient to ask questions.

**2. Ask about their history and preferences**
What is their history of spectacle use, and their willingness to keep wearing spectacles, or switch from distance to near-vision spectacles? Patients with myopia sometimes prefer to maintain some degree of shortsightedness, as they have been used to reading or using a smartphone without the need for spectacles.

Find out how the patient would feel about changing the type of spectacles they will need after surgery. Explain that, if they opt for better distance correction without spectacles, they may need spectacles for near vision, and vice versa.

**3. Inform the patient about their options**
Explain the various options available (see panel). The choice depends on the patient's visual requirements and lifestyle; for example, whether they depend on near vision for their job or wish to avoid wearing spectacles altogether after cataract surgery.

**4. Support them to make a decision**
There may not be a single definitive solution to a patient's issue. We recommend shared decision-making: an approach in which health care providers and patients collaboratively discuss treatment options to select the most appropriate one, depending on the patient's needs and preferences.

Explain all the costs involved and support the patient to work out whether they can afford the direct costs associated with the procedure, including insurance coverage (and the cost of premium lenses, if those are selected) and the cost of any spectacles that may be needed after surgery.

In some contexts, decisions regarding surgery for elderly parents are made collectively by the family. Because it is often the patient's children who will pay for surgery, it is important to explain to them that visual impairment is not a natural consequence of ageing and that cataract surgery can significantly improve the person's visual function, restore their independence, and improve their quality of life.

**5. Counselling about postoperative care and refraction**
Explain to patients how important it is that they come back for postoperative follow-up and refraction, so that they can achieve the best possible final visual outcome.

*To read the full version of this article, including a case study, visit* **https://cehjournal.org/articles/10.56920/cehj.865**

## Intraocular lens options for patients who want to retain some near vision

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Discussing refractive expectations from cataract surgery is necessary for most patients, but particularly for myopes. All their life they have seen near objects clearly. If lens implants are selected targeting good distance vision (emmetropia) they will lose this ability, and will need near-vision spectacles. For these patients, or others who prioritise good near vision, there are various options.

### Option 1: Choosing IOLs that leave the patient slightly short-sighted

Standard monofocal IOLs can be selected to leave a patient slightly under-corrected for distance vision. If a patient is intentionally left slightly short-sighted, they will have the benefit of having reasonable vision for distance, but will also be able to focus on some near objects or tasks.

**Who it is useful for:** Patients who already have myopia and are used to wearing spectacles for distance vision (and will continue to be able to afford them). These patients may prefer to retain good uncorrected near vision.

**What to say to patients:** Explain to patients what they are likely to be able to see nearby and in the distance, depending on the level of myopia aimed for (see Table 1 for some examples).

Aiming to leave a patient with myopia of -1.00 D to -1.50 D will allow them to focus at 1 metre to 67 cm, with VA of 6/18 to 6/30 (see Table 1), provided their eyes are otherwise healthy. These patients will still need near-vision spectacles for detailed tasks nearer than 67 cm, and distance vision spectacles for driving. If a patient wants to be able to focus on tasks at distances of 50 cm or 33 cm, without the need for near-vision spectacles, select IOLs that will give them -2.00 D or -3.00 D myopia, respectively. The patient would need spectacles for most distance vision tasks (see Table 1).

### Option 2: Monovision

An alternative is monovision; this involves using standard monofocal IOLs of different powers, calculated to correct the dominant eye for distance vision and the non-dominant eye for near vision. Some patients find that this works well for them, and they have the benefit of not having to wear spectacles at all. Others may not be able to easily adjust to monovision, particularly if the difference between the two eyes is greater than 2.00 D.

**Top tip:** Aiming for a difference of as little as 1.00 D between the two eyes would give some useful near vision as well as good distance vision. For example, aiming -0.25 D in the first eye and -1.25 D in the second eye will be almost universally tolerated and give good distance vision, as well as near vision focused as close as 80 cm.

**Who it is useful for:** Consider for patients undergoing cataract surgery in both eyes, particularly those who are unlikely to purchase spectacles after surgery. Patients who naturally have one eye focused for near and one for distance, and those who have tried monovision contact lenses and tolerated them, may find it easier to adjust to monovision.

**NOTE:** People who are very likely to obtain prescription spectacles postoperatively may not need this, particularly if they have a strong reason to want good unaided vision at a particular distance (e.g. if they spend the majority of their time driving, or doing detailed near work).

### Option 3: Multifocal and other specialist lenses

In some centres, multifocal IOLs may be available. They are designed to give good near and distance vision, but they may fall short of expectations and cause side-effects such as glare; they can also be very expensive.

**What it involves:** Multifocal intraocular lenses split light into multiple focal points, allowing patients to see objects in focus at near, intermediate and far distances.

**Who it is useful for:** Those who can afford the technology and who don't want to wear spectacles.

**NOTE:** These lenses are not suitable for people who need to drive after dark (as the lenses can cause haloes around lights at night) and people with conditions such as age-related macular degeneration, diabetic retinopathy, and glaucoma, as the lenses can make it more difficult to examine the back of the eye.

**Table 1** Some suggestions for explaining the impact of IOL choice on near and distance vision.

| Targeted degree of myopia | Near working distance | Distance VA | Near Vision | Distance Vision |
|---|---|---|---|---|
| **-1.00 D to -1.50 D** | 1 m to 67 cm | 6/18 to 6/30 | You will be able to prepare food, count money, or do agricultural work like weeding or harvesting, without needing near-vision spectacles. | You will need distance vision spectacles in order to drive, or to clearly see the face of someone on the other side of the street. |
| **-2.00 D** | 50 cm | 6/45 | You will be able to read books and newspapers, or write messages on a phone, without needing near-vision spectacles. | You will need distance vision spectacles to recognise the faces of people you know if they are more than 1–2 metres away from you. |
| **-3.00 D** | 33 cm | 6/120 | You will be able to read food labels or medication pamphlets, or do very fine or detailed needlework, without needing near-vision spectacles. | Without distance vision spectacles, your eyesight will be so limited that you may have difficulty moving around safely, even at home. |

# Creating a simulation model to practise initial steps in small-incision cataract surgery

Superior rectus bridle suture placement, conjunctival peritomy, and recession of Tenon's fascia are important steps to practise.

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When learning small incision cataract surgery, steps like scleral tunnel creation and intraocular manipulation are often prioritised. Fewer opportunities exist to practise the important initial steps of superior rectus bridle suture placement and conjunctival and Tenon's incisions.

In this article, we show how to construct a low-cost model that can be used to practise superior rectus bridle suture placement, conjunctival peritomy, and recession of Tenon's fascia. The model highlights the position of the Tenon's insertion, posterior to the conjunctival insertion, and it facilitates blunt dissection in the sub-Tenon's space at the appropriate distance from the limbus, reproducing cutting both Tenon's and conjunctiva together, in a realistic manner.

This model has been extensively tested to ensure it functions well during simulation practice. It is therefore important to follow every step below, exactly as described.

In the next article in this series, we will show how to use the model for simulation practice.

**Figure 1** Materials needed to create the different anatomical features of the model

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## 1. What you will need

To create the different anatomical features of the model, you will need the following materials (see Figure 1):

- Toilet roll (to simulate the **face**)
- Thin cardboard, A5 or bigger (this will be made into a cone, to simulate the **orbit**)
- Polystyrene ball, 3 cm diameter (to simulate the **eyeball**)
- Rubber band, approximately 3 mm wide and at least 9 cm in length (to simulate the **superior and inferior rectus muscles**)
- Soft, coloured plastic (such as a shopping bag), cut into a 10 cm x 10 cm square (to simulate **Tenon's fascia**)
- Cling film or cling wrap (clear), cut into a 10 cm x 10 cm square (to simulate the **conjunctiva**)
- Clear, firm plastic packaging material. You will need about 3 cm x 5 cm, cut into two circles (to simulate **insertions of Tenon's fascia and conjunctiva**).
- Adhesive tape to simulate the **conjunctival fornix**.

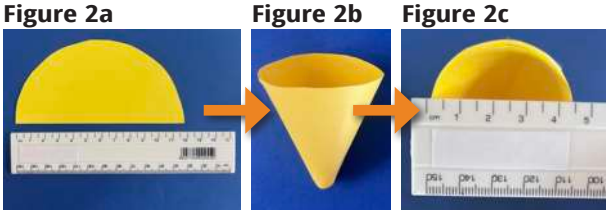
You will also need:

- A sewing pin, just over 3 cm long, with a small, flat head
- Two thin rubber bands
- A red ballpoint pen
- Black and blue felt-tip pens
- Scissors
- All-purpose glue
- Flexible measuring tape
- A large sewing/embroidery needle (a minimum of 5 cm in length)
- A short piece of thread
- An orange stick or skewer
- A small, sharp-tipped knife, craft knife or scalpel
- A toothpick or matchstick, cut to a length of 2 cm.

## 2. Make the 'eye socket'

Using the thin cardboard, cut a semicircle with a diameter of 12 cm, as shown in Figure 2a. Fashion a small cone as shown in Figure 2b. The cone opening should be slightly wider than the diameter of your toilet roll's inner cardboard cylinder (> 4.5 cm), see Figure 2c. Secure the overlapping parts with adhesive tape. Cut about 5 mm off the tip of the cone to create a small opening.

**Figure 2a** **Figure 2b** **Figure 2c**



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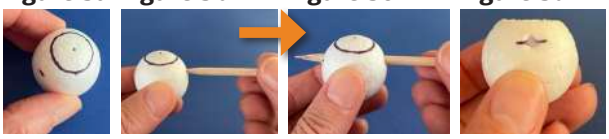
## 3. Create the 'eyeball' shape and 'rectus muscle' insertion points

- Create a centre point on the polystyrene ball by marking it with the ballpoint pen. Draw a circle around this centre point by making multiple marks 9 mm from the centre, joining them as shown in Figure 3a.
- Mark the 'rectus muscle' insertion points 8 mm outside this circle, on opposite sides (Figure 3a). These will serve as a guide for creating the channel for the rubber band. With the sharp end of the orange stick or skewer, create a channel between the two rectus muscle insertion markings, as shown in Figure 3b and Figure 3c. The best approach is to push the skewer or stick through from one end to the middle, and then from the other end to the middle, completing the channel all the way through.
- Remove the skewer or stick.
- Carefully cut away the part of the 'eyeball' inside the circle using a craft knife (see Figure 3d).

**Figure 3a** **Figure 3b** **Figure 3c** **Figure 3d**



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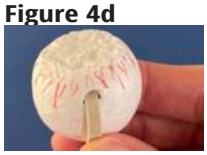
## 4. Create the rectus muscles

- Use a loop of thread on the sewing needle to pull the wider rubber band through the channel in the ball, as shown in Figure 4a and 4b. Then remove the needle and thread, leaving just the rubber band (Figure 4c). The ends can be trimmed at a later stage.

**Figure 4a** **Figure 4b** **Figure 4c**

- With the red ballpoint pen, draw some 'blood vessels' around the cut surface, as shown in Figure 4d.

**Figure 4d**



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## 5. Prepare 'Tenon's fascia' and the 'conjunctiva'

- To secure 'Tenon's fascia' and the 'conjunctiva' to the eyeball, you will need two plastic discs; the bigger disc simulates the insertion of **Tenon's fascia** and the smaller disc simulates the insertion of the **conjunctiva**.
- Draw two circles with the felt-tip marker on the hard packaging plastic. You can use a round object of the desired diameter to trace around, e.g. the cap of a marker pen or lipstick. The larger disc is 18 mm in diameter and represents the insertion of **Tenon's fascia**; the smaller disc is 15 mm in diameter and represents the **insertion of the conjunctiva** (Figure 5a). You can colour in the smaller of the two discs to resemble an iris. Cut both out and use the sewing pin to make a hole in the centre of each disc (Figure 5b).

**Figure 5a**

**Figure 5b**

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## 6. Assemble 'Tenon's fascia' and the 'conjunctiva'

- Place the 'eyeball' on a stable surface, with the flat surface facing up.
- Cover it with the plastic square ('Tenon's fascia'). Place the larger, clear plastic disc on top, ensuring that the hole is in the centre of the flat surface (see Figure 6a – the disc is outlined in the image).
- Place the cling film square ('conjunctiva') over the plastic disc and plastic square, covering the 'eyeball' (Figure 6b).
- Push the pin halfway through the hole in the smaller disc. With care, push the tip of the pin through the cling film and into the hole in the bigger disc (Figures 6c and 6d).
- Holding everything together firmly, push the pin straight through the polystyrene ball.

**Figure 6a**

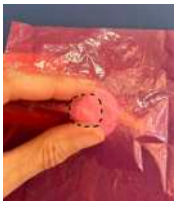

**Figure 6b**

**Figure 6c**

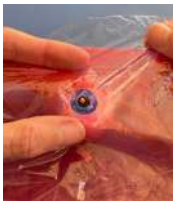

**Figure 6d**

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## 7. Complete the 'eyeball'

- Carefully turn the model over so the front of the 'eye' is resting on a firm surface (Figure 7a). A small piece of the pin should be visible on the other side of the polystyrene ball. Take care to avoid pricking yourself with the sharp end.

**Figure 7a**

**Figure 7b**

**Figure 7c**

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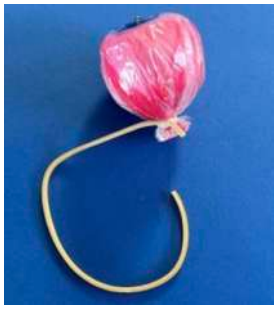
- Stretch the two ends of the wider rubber band around the polystyrene ball and secure them by hooking them onto the pin, one side at a time (Figure 7b). Trim any excess (Figure 7c). This simulates the **inferior and superior rectus muscles**.
- Take one of the thin rubber bands, and cut it once. Gather the two layers of plastic around the polystyrene ball as neatly as possible. Bring them together at the site where the pin emerged and secure them by tying one end of the thin rubber band around the plastic (Figure 7d). Do not make it too tight; there should be enough 'give' to allow your instruments to cut the plastic layers.
- Once you are satisfied, tie a simple knot, leaving one end long enough to reach the bottom of the cone. Trim the excess plastic extending beyond the knot (Figure 7e).

**Figure 7d**

**Figure 7e**



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## 8. Assemble the model

- Place the eyeball into the cone. Let the long end of the rubber band go through the hole in the cone. Tie it around the short section of toothpick or matchstick and make a simple knot. Mild tension will keep the eyeball in position in the cone (Figure 8a).
- Glue the cone to the rim of the toilet roll. There should be about 0.5 cm of the cone protruding above the rim (Figure 8b). Ensure that the inferior and superior 'rectus muscles' (the rubber bands) are in the correct orientation before you draw facial markings on the toilet roll (Figure 8c).

**Figure 8a**

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**Figure 8b**

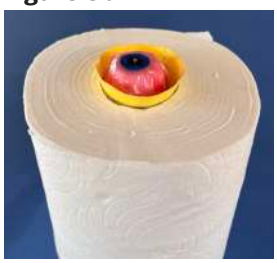

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**Figure 8c**

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## 9. Create the 'conjunctival fornix'

- Cut a segment of adhesive tape, measuring 0.5 cm x 4.0 cm. Note where the 'inferior rectus' rubber band emerges from the 'eyeball' (see arrow in Figure 9a).
- Apply the tape from the centre of the coloured disc to the outer part of the rim of the cone (Figure 9a. Note: the adhesive tape is outlined in black). This simulates the conjunctival fornix, which will be used to rotate the 'eyeball' inferiorly to create exposure of the 'superior rectus muscle'.
- Place the second thin rubber band around the toilet roll.
- Figure 9b shows the complete model, ready for use.

**Figure 9a**

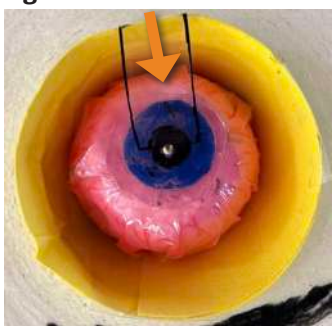

**Figure 9b**

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Ophthalmology Foundation

# Advancing ophthalmic training: the role of subspecialty fellowships

Fellowships can have lasting benefits for ophthalmologists and their home institutions.

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International subspecialty fellowships allow ophthalmologists to spend time at a host institution in another country. It is not only an opportunity to gain knowledge and skills in your own subspecialty; the chance to work in another institution also exposes fellows to the challenges and opportunities of different health systems, and to population groups, disease profiles, and presentations they may not have encountered before.

Spending time away from family and your place of work can be challenging, for fellows and those left behind. If you are considering applying for a fellowship, speak with family members, colleagues, and the hospital administration about your reasons for doing so. Explaining how the fellowship will benefit your department and improve patient outcomes will help to make colleagues and managers more receptive to new ideas on your return. In a 2020 study, 92% of ophthalmologists who had taken up a fellowship said they learnt techniques in diagnosis, treatment, or surgery that were new to them, and 85% began regular teaching events in their department after their return.[1]

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**An international subspecialty fellow learning trabeculectomy techniques in a simulation laboratory.** GERMANY

## Finding a fellowship

Over the last 5 years, 420 ophthalmologists from underserved and low-resource countries have received support from the IOFF–OF programme to undertake advanced subspecialty training or research opportunities at leading international eye centres. The fellowships are administered by the International Ophthalmological Fellowships Foundation (IOFF) in collaboration with the Ophthalmology Foundation (OF). Most of the fellowships are three-month 'observerships' that support candidates to observe outpatient clinics and surgical procedures at host institutions in 30 countries. A limited number of surgical fellowships are offered at host institutions in India and China; these require candidates to apply for a temporary licence to practise. Generous financial support is available to cover travel and living expenses, making the opportunity accessible to candidates worldwide.

Essential criteria for IOFF-OF fellowships:

- From, and permanently based in, a low-resource or underserved country
- Completed residency training and obtained a Specialist in Ophthalmology degree, which means candidates can practise independently
- Less than 40 years of age
- Strong recommendations from candidates' head of department and residency director.

There are close to 100 fellowships available per year, with 2–3 applicants competing for every space. Applications are assessed against a structured scoring framework, and additional weight is given to applicants from settings with the greatest public health need.

### Personal experience

**Dr Maryam Idris Abdullahi (Nigeria)** undertook a 3-month observership in Germany in 2024. "I learnt the pearls of glaucoma management, from patient assessment to all currently available glaucoma treatment modalities. I also had in-depth exposure to SLT laser, trabeculectomy, glaucoma drainage devices, and MIGS. I was also privileged to use simulation eyes to practise trabeculectomy. During my training, I attended two international conferences; the knowledge gained and the opportunity to network with teachers and colleagues was very much appreciated. I am currently collaborating with my German fellowship supervisor and her research team in glaucoma research."

## New essential criteria

Completion of the OF international ophthalmology examinations – which provide an internationally benchmarked standard – will be mandatory for all applicants from September 2027. This ensures that valuable fellowship time is not wasted assessing how much the ophthalmologist already knows, or in covering basic knowledge before focusing on the area of need identified in the application. Under the new requirement, applicants must either:

- Pass the OF Visual Sciences and OF Optics, Refraction & Instruments examinations, or
- Hold approved exemptions from those examinations and pass the OF Clinical Ophthalmology examination.

Until July 2027, OF examination passes remain optional but continue to strengthen fellowship applications through additional credits. From 2027, the new fellowships application deadline will be 31 August 2027, to align with the OF examinations timeline.

For more information about the exam criteria, visit **bit.ly/Pd5bh7**. To apply, visit **bit.ly/7gbq3q**.


**Reference**

1 Torres-Netto EA, Gabel-Obermaier C, Gabel P, et al. Twenty years of International Council of Ophthalmology fellowships: description of the programme and the impact on more than 1100 awardees. *Br J Ophthalmol*. 2021;105(9):1318-1324. doi:**10.1136/bjophthalmol-2020-316484**


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# Pre- and postoperative communication with cataract patients and their family

Clear, compassionate patient education can improve safety, reduce anxiety, and support follow-up.

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**Postoperative group counselling of patients done prior to eye dressing removal.** INDIA

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*Adapted from Adekhera E, Nyamai LA, Astbury N. Pre- and postoperative communication with cataract patients, volume 29 issue 94, 2016. Substantially revised.* **bit.ly/cehj433**

With the huge backlog in cataract surgery in low- and middle-income countries worldwide, there is often a lot of pressure on eye care workers to get cataract patients through the system as quickly and efficiently as possible.

However, there is a compelling case for taking time to communicate clearly and compassionately with cataract patients and their family members before and after surgery – for example, encouraging them to ask questions, and confirming their understanding of what you have explained. If the patient doesn't feel respected, they will not have a good experience – and will be less likely to encourage friends and family members to come forward. Worse, they may not feel confident to ask questions or share important information – or come back for follow-up visits – which may have devastating clinical implications. Our patients are human beings. It can be helpful to ask ourselves if we would be happy for our own parent or family member to receive the quality of care we provide to others.

## Before surgery

Give patients and their families advice and counselling about the operation, including what happens before,

**Table 1** What advice to give to patients and family members during follow-up appointments.

| Follow-up stage | Day 1 (Immediate postoperative visit) | Week 1 (Early healing phase) | Week 4–6 (Final assessment, refraction, rehabilitation) |
|---|---|---|---|
| What advice to give | **Explain** how to care for their eye (what they must do, and what they must avoid)<br>**Explain** the importance of instilling their eye drops (antibiotics and steroids)<br>**Show** them how to instil eye drops safely<br>**Explain** what normal healing will look and feel like, and how to manage their symptoms (mild pain & irritation)<br>**Explain** what the danger signs are and the importance of getting help immediately – and how to do that | **Explain** how to gradually reduce the steroids as directed<br>**Remind** them to complete the full course of antibiotics<br>**Remind** them to avoid strenuous activity<br>**Advise** that they can now wash the face/eye with clean, safe water. However, they must avoid swimming in untreated water. | **Perform refraction** if possible, or refer for refraction if needed<br>**Advise** patients they can resume normal lifestyle<br>**Advise** patients to watch for any gradual decline in vision (possible posterior capsule opacification) and to come back if this happens |

during and afterwards. They should then sign a consent form. It is our responsibility to ensure that the patient understands – in straightforward terms – what is going to happen and what this means for them and their eye health. Take time to address any fears, doubts, and myths about cataract surgery.

It is important to ensure that patients and their families have realistic expectations about their vision after surgery. Help them to understand the risks and benefits, including the potential effect of different complications on their eyesight. A disappointed patient is not a good advertisement for our service.

Patients have a vital role to play in alerting the eye team to potential postoperative complications at an early stage. Before surgery, explain to patients how their eyes will look and feel after a successful operation, including what level of discomfort is normal during the recovery stage. Encourage them to speak with an eye team member if they experience anything that concerns them. This can be repeated after surgery.

It is helpful to have a team member who speaks the patient's language. This can help to increase their understanding of any information being shared and boost their trust in the eye service. Ask questions to confirm that the patient understands everything they have been told.

If operations take place in an outreach location, counselling may be in a group setting. This may reduce individualised care but provides an opportunity for patients to share experiences and coping strategies, which can reduce anxiety and improve compliance.

## After surgery

After the operation, give patients and family members verbal and written information about the following:

- How to look after their operated eye when they are back at home.
- When to come back for a follow-up appointment: where to go,
  at what time, and how to reschedule if needed.
- How the eye will look and feel after surgery – i.e., what is normal and expected.
- What warning signs or red flags to look out for: worsening sight, increasing pain, redness, swelling, or discharge (see panel) – and how to get in touch with the eye clinic or their surgeon if they have these signs or symptoms.

## At discharge

Tell patients to bring all their eye drops to their follow-up appointments. Check that they have all of the following:

- Instruction sheet to take home
- Clinic contact details
- Eye shield (if available)
- Eye drops and instructions for storage and use
- Painkillers to use at home
- A follow-up appointment date and time.

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KEY MESSAGES

# Key community eye health messages

## Respectful communication improves patient trust

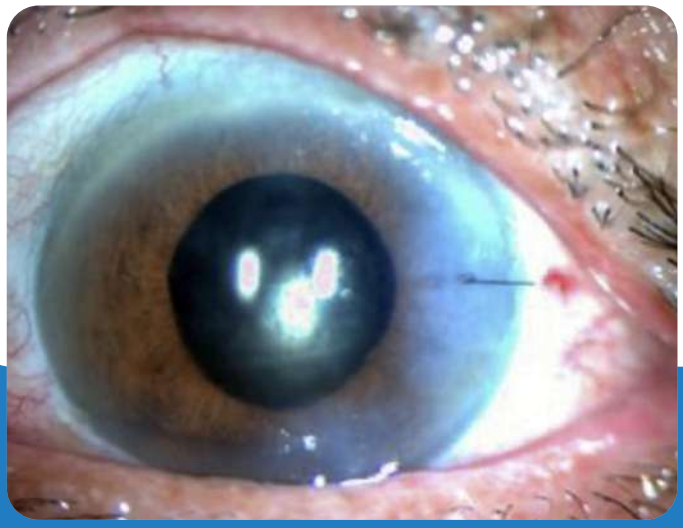
- Explain the benefits, risks and expected outcomes of cataract surgery in the patient's preferred language, using words they can easily understand
- Discuss patients' visual needs and available IOL options before surgery to help them make informed choices
- Ask about barriers such as travel costs, lack of family support and difficulty attending follow-up visits, and help patients plan ahead

## Clear postoperative instructions support safe recovery

- Give patients verbal and written instructions on eye care, medicines, follow-up visits and warning signs
- Show patients and family members how to use eye drops correctly and check their understanding
- Explain that mild discomfort, watering, redness and blurred vision are common after surgery but should gradually improve
- Before discharge, check that patients have their medicines, clinic contact details and follow-up appointment information

## Informed IOL selection improves patient satisfaction

- Ask patients about their daily activities and near- and distance-vision needs before discussing IOL options
- Explain expected visual outcomes to patients with myopia, especially those used to seeing clearly up close without spectacles
- Discuss the benefits, limitations, possible side-effects and costs of different IOL options
- Record patients' visual needs and preferences and involve them in choosing the most suitable IOL



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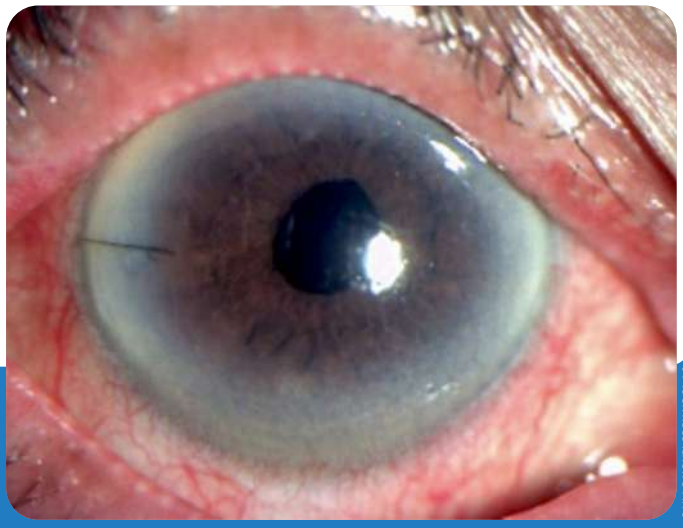

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